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MEMORANDUM

From: Ryan Wiser and Mark Bolinger, Berkeley Lab
Subject: Revealed Wind Costs: FERC-Filed PPAs and Power Plant Sales Filings
Date: May 1, 2002

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1 SUMMARY

Revealed cost data for wind power projects has always been difficult to come by. Berkeley Lab has recently come across several new wind PPAs filed at FERC. Here we summarize the content of these contracts as well as several other contracts filed at FERC within the last year. We also summarize three wind power contracts that have been signed with the California Department of Water Resources, two of which have recently been renegotiated. The contracts that are summarized below include:

- Mill Run, PA
- Somerset, PA
- Condon, OR
- Shoshone, NV
- Monfort, WI
- Peetz Table, CO
- Llano Estacado, TX
- Rock River I, WY
- Addison, WI
- Mountainview, CA
- Whitewater Hill, CA
- Cabazon, CA
- Stateline, OR

We also summarize two wind plant sales agreement FERC filings:

- Zilkha and Entergy: Mill Run, Somerset, Top of Iowa
- Cielo and Shell: Llano Estacado

Below we highlight some of the key features of these contracts and plant sales agreements, but we also note that the contracts contain numerous provisions not highlighted here. For full copies of the contracts, please contact us.

We also want to emphasize that this memorandum should not be circulated or cited.

Some of the FERC contracts were available on the FERC website presumably “by accident” – that is, the contract holder asked FERC to only supply the redacted version publicly, but FERC mistakenly put the non-redacted copy on its website likely for a brief period as it transitions from one database system to another. The Department of Energy has also been sensitive about releasing the FERC contract data publicly. We therefore provide this memo as an internal document, not for redistribution or citation.

2 WIND PPAS: A CONTRACT-BY-CONTRACT SUMMARY

2.1 Mill Run

Project Size: 15.0 MW

Project Location: Fayette County, Pennsylvania

Project Developer/Owner: AREC/Zilkha developed project and are initial owners; AREC and Zilkha are seeking long-term project owner to which to sell the facility (Entergy was lined-up to purchase the project, see section 3.1 later, but failed to do so).

Purchaser of Energy: Exelon Generation Company, LLC.

Contract Execution Date: February 14, 2001

Project On-Line Date: December 20, 2001 is designated start date

Projected Output and Capacity Factor: 44,000 MWh, 33.5% capacity factor

Turbine Manufacturer and Size: 10 Enron 1.5 MW turbines

Contract Price and Term: 20-year contract starts at \$41/MWh and increases annually to end at \$46.94/MWh in year 20. Extra payments for achieving more than 80% of estimated production. If achieve 100% of estimated production, contract price will be ~\$1/MWh more than prices noted above.

Provisions for Delayed Commercial Operation: Seller to pay buyer \$1600 per day as liquidated damages if commercial operation begins after designated start date, unless excused (not to exceed \$160,000); other payments required for individual turbines that do not meet the construction deadline; buyer may terminate if construction delayed further.

Availability Guarantees and Warranty Provisions: Seller guarantees at least 80% of estimated annual output. Seller pays buyer \$10/MWh for output below the 80% threshold (with a not-to-exceed limit of \$50,000 per year). If project exceeds 80% of estimated production, buyer pays seller \$10/MWh for the excess, with a cap of \$50,000. Seller also guarantees that project will deliver 5-year average of not less than 90% of estimated production, with similar payments if actual output exceeds or is lower than 90%. Buyer may terminate if annual output falls below 50% of estimated annual output for three consecutive years.

Treatment of Renewable Attributes: Sold to Exelon along with electricity.

2.2 Somerset

Project Size: 9.0 MW

Project Location: Somerset County, Pennsylvania

Project Developer/Owner: AREC/Zilkha developed project and are initial owners; AREC and Zilkha are seeking long-term project owner to which to sell the facility (Entergy was lined-up to purchase the project, see section 3.1 later, but failed to do so).

Purchaser of Energy: Exelon Generation Company, LLC.

Contract Execution Date: April 4, 2001

Project On-Line Date: December 20, 2001 is designated start date

Projected Output and Capacity Factor: 24,000 MWh, 30.4% capacity factor

Turbine Manufacturer and Size: 6 Enron 1.5 MW turbines

Contract Price and Term: 20-year contract starts at \$46.66/MWh and increases annually to end at \$52.6/MWh in year 20. When and if the Sustainable Development Fund of Pennsylvania provides the seller with a grant of \$1 million or \$3.6 million of 10-year, 5% interest rate subordinated debt, pricing will start at \$41/MWh in year 1 and increase to \$46.94/MWh in year 20. (The subordinated debt has been offered, so this second pricing formula likely applies). Extra payments for achieving more than 80% of estimated production. If achieve 100% of estimated production, contract price will be ~\$1/MWh more than prices noted above.

Provisions for Delayed Commercial Operation: Seller to pay buyer \$960 per day as liquidated damages if commercial operation begins after designated start date, unless excused (not to exceed \$96,000); other payments required for individual turbines that do not meet the construction deadline; buyer may terminate if construction delayed further.

Availability Guarantees and Warranty Provisions: Seller guarantees at least 80% of estimated annual output. Seller pays buyer \$10/MWh for output below the 80% threshold (with a not-to-exceed limit of \$30,000 per year). If project exceeds 80% of estimated production, buyer pays seller \$10/MWh for the excess, with a cap of \$30,000. Seller also guarantees that project will deliver 5-year average of not less than 90% of estimated production, with similar payments if actual output exceeds or is lower than 90%. Buyer may terminate if annual output falls below 50% of estimated annual output for three consecutive years.

Treatment of Renewable Attributes: Sold to Exelon along with electricity.

2.3 Condon

Project Size: 49.8 MW; Phase I = 24.6 MW, Phase II = 25.2 MW

Project Location: Gilliam County, Oregon

Project Developer/Owner: SeaWest.

Purchaser of Energy: BPA

Contract Execution Date: November 7, 2001

Project On-Line Date: Expected operation dates – no later than December 31, 2001 for Phase I, on or around June 15, 2002 for Phase II.

Projected Output and Capacity Factor: 25.57% capacity factor

Turbine Manufacturer and Size: 83 Mitsubishi MWT600 turbines

Contract Price and Term: As of completion of Phase I and II, 20-year contract starts at \$54.6/MWh and escalates at 2.5% each year if the PTC is available. If the PTC is not extended (such that Phase I receives the PTC, but Phase II does not), contract starts at \$63.23/MWh and escalates at 2.5% per year. If the PTC is not extended and Phase I is not complete by December 31, 2001 (i.e., both phases miss the PTC), then the contract starts at \$71.51/MWh and escalates as 2.5% per year. Contract price will be adjusted downward is capacity factor if higher than estimate above (for example, a capacity factor of 30.57% - 5% higher than projected - would result in a decrease in the rate of \$9.5/MWh.)

Provisions for Delayed Commercial Operation: If commercial operation of Phase I is delayed more than 120 days then seller shall reimburse BPA for payments made for transmission services. Commercial operation of the entire facility later than December 31, 2002 shall constitute default.

Availability Guarantees and Warranty Provisions: Seller's failure to use commercially reasonable efforts to achieve availability factor of 75% during 12-month period may result in default and termination.

Treatment of Renewable Attributes: Sold to BPA along with electricity.

Other Notes: Seller shall be liable each year for the lesser of (1) 50% of all generation imbalance charges invoiced by the transmission system operator, or (2) \$100,000. BPA shall be liable for all other charges.

2.4 Shoshone Wind Farm, Nevada Test Site

Project Size: 85 MW

Project Location: Nevada Test Site, Nye County, Nevada

Project Developer/Owner: MNS Wind Company, LLC (later PowerStar)

Purchaser of Energy: Nevada Power Company

Contract Execution Date: February 26, 2002

Project On-Line Date: Expected operation date – no later than December 31, 2003

Projected Output and Capacity Factor: 230,000 MWh, 30.7% capacity factor (a small amount of energy – 1.28% - is delivered to the DOE's NTS in payment for seller's use of the NTS' transmission system)

Turbine Manufacturer and Size: 57 NEG Micon 1500/72 turbines

Contract Price and Term: 17-year contract, with option for buyer to extend contract an additional 8 years (25-year contract total). Contract may be terminated by buyer or seller with one year's notice starting in the 22nd contract year. Contract price varies by on-peak and off-peak delivery (on peak hours are defined as 10 a.m. to 10 p.m. June through September). On peak prices start at \$54/MWh in year one and increase to \$74.13/MWh in year 17. Prices then drop to \$36.6/MWh in year 18 and rise to \$40.555/MWh in year 25. Off-peak prices start at \$43.3/MWh in year one, increase to \$59.442/MWh in year 17, drop to \$36.6/MWh in year 18 and rise to \$40.555/MWh in year 25. No later than the 18th contract year, buyer has the right to make a one-time election to set the price starting in the 18th contract year at the lesser of: (1) buyer's market price at that time, or (2) O&M costs of the facility at the time – determined to be \$26.6/MWh – plus \$10/MWh.

Provisions for Delayed Commercial Operation: Due to uncertainty in the PTC, if construction has not begun by June 30, 2003 the agreement shall terminate. Not meeting construction milestone dates will constitute a default, unless excused.

Availability Guarantees and Warranty Provisions: Buyer may draw from security account if seller does not perform at an average of 75% of the estimated annual output over contract years 18 through 21. Seller's inability to deliver energy for 120 days in any 365 day period shall constitute a default, unless excused.

Treatment of Renewable Attributes: Sold to Nevada Power along with electricity to meet Nevada Power's RPS requirement.

2.5 Badger Wind Power - Monfort Wind Farm

Project Size: 25.5 MW (ended up being 30 MW)

Project Location: Unspecified, but this looks like the Eden, Iowa County, Wisconsin wind farm

Project Developer/Owner: Badger Windpower LLC (FPL Energy/Enron Wind)

Purchaser of Energy: Wisconsin Electric Power Corporation as stated in PPA

Contract Execution Date: December 8, 2000

Project On-Line Date: Expected operation date – before January 1, 2001 as stated in PPA

Projected Output and Capacity Factor: 51,381 MWh, 23% capacity factor

Turbine Manufacturer and Size: Approximately 17 1.5 MW turbines in PPA

Contract Price and Term: 10 year contract, with 5-year extension option for buyer and then another 5-10 year extension option. Contract price for power up to the contract energy amount = \$84/MWh in first year, rising to \$103.28/MWh in the 10th year. Price equals \$80/MWh during 15-year extension option. If seller fails to deliver contract energy amount in one year, the deficiency shall be added to the subsequent year's contract energy amount. If seller delivers more power than contract energy amount, the excess will be priced at the buyer's net generation cost.

Provisions for Delayed Commercial Operation: If commercial operation has not been achieved before April 30, 2001 then seller shall pay to buyer liquidated damages. If commercial operations are not achieved by November 15, 2001, the seller shall be in default.

Availability Guarantees and Warranty Provisions: None specified

Treatment of Renewable Attributes: Sold to Wisconsin Electric along with electricity.

2.6 Peetz Table

Project Size: 29.7 MW

Project Location: Logan County, Colorado

Project Developer/Owner: enXco/Cinergy

Purchaser of Energy: PSCo

Contract Execution Date: September 21, 2000

Project On-Line Date: Expected operation date – before December 31, 2001

Projected Output and Capacity Factor: 70,000 MWh, 26.9% capacity factor (other documents in PPA indicate capacity factors of 28.8% and 31%)

Turbine Manufacturer and Size: 33 NEG Micon 900 kW turbines

Contract Price and Term: 15 year contract. During first contract year, price equals \$37.2/MWh for up to 35 GWh, and \$32.32/MWh for 35-77 GWh (at expected output, weighted average price \$34.6/MWh). During second and third contract years, price adjusted for inflation. After third year, price equals \$37.2/MWh adjusted for inflation for energy up to 77 GWh/year. For generation above 77 GWh/year, PSCo shall pay the then-current qualifying facility energy payment rate. A facilities charge to cover interconnection costs is additional to the contract prices noted above. If facility fails to achieve commercial operation in 2001 and does not receive the PTC due to an interconnection failure of the buyer, then the energy rate may be adjusted. The adjustment is complex and depends on how many turbines are not eligible for the PTC and the duration of the interconnection delay.

Provisions for Delayed Commercial Operation: Seller agrees to meet certain construction milestones, or else pay damages (\$160/day) or default on the contract. If commercial operation date is not met, damages = \$2,600 per day. A damage cap of \$1.7 million limits the total damages.

Availability Guarantees and Warranty Provisions: If facility output is below 49 GWh in any 12-month period (18.8% capacity factor), seller will breach contract and buyer may terminate.

Treatment of Renewable Attributes: Renewable energy credits to PSCo along with electricity. Any environmental credits are owned and retained by the seller.

Other Notes: Interconnection costs are additional to the contract price.

2.7 Llano Estacado

Project Size: 80 MW

Project Location: Carson County, Texas

Project Developer/Owner: Cielo/Shell

Purchaser of Energy: Southwestern Public Service

Contract Execution Date: February 27, 2001, amended October 4, 2001

Project On-Line Date: Expected operation date – no later than December 31, 2001

Projected Output and Capacity Factor: 265,000 MWh, 37.8% capacity factor

Turbine Manufacturer and Size: 80 Mitsubishi 1.0 MW turbines

Contract Price and Term: 15-year contract. Contract price is initially \$21.82/MWh for generation up to 115% of projected output. Rate is adjusted for inflation in future years. For all generation above 115% of expected generation, contract price is 50% of the contract price specified above. Contract price is based on an estimated interconnection cost of \$1.25 million. If actual costs vary from this amount, contract price will be adjusted. If facility fails to achieve commercial operation in 2001 and does not receive the PTC due to an interconnection failure of the buyer, then the energy rate may be adjusted. The adjustment is complex and depends on how many turbines are not eligible for the PTC and the duration of the interconnection delay.

Provisions for Delayed Commercial Operation: Seller agrees to meet certain construction milestones, or else pay damages (\$100/day) or default on the contract. If commercial operation date is not met, damages = \$1,000 per day. A damage cap of \$1 million limits total damages.

Availability Guarantees and Warranty Provisions: If actual amount of delivery is consistently below the projected output as specified above, seller shall pay a deficiency payment on the shortfall, or supply the buyer with an equivalent number of renewable energy credits. The deficiency rate is initially set at \$50/MWh as established in PUC's RPS rule; the deficiency rate shall be adjusted based on future PUC action. Seller agrees to meet a minimum annual energy output of 185,500 MWh (26.4% capacity factor) or otherwise default on the agreement.

Treatment of Renewable Attributes: Renewable energy credits to Southwestern Public Service along with electricity.

2.8 Rock River I

Project Size: 50 MW

Project Location: Carbon County, Wyoming

Project Developer/Owner: SeaWest/Shell

Purchaser of Energy: PacifiCorp

Contract Execution Date: January 22, 2001

Project On-Line Date: Expected operation date – no later than December 31, 2001

Projected Output and Capacity Factor: 161,800 MWh, 36.9% capacity factor

Turbine Manufacturer and Size: 50 Mitsubishi 1.0 MW turbines

Contract Price and Term: 20 year contract. Contract price is \$35.48/MWh flat. If PacifiCorp fails to accept delivery, they must pay the seller the contract price plus a “PTC component.” The PTC component is equal to the pre-tax equivalent value of the PTC = $PTC/(1 - \text{tax rate})$. If facility fails to achieve commercial operation in 2001 and does not receive the PTC, due to an interconnection failure of the buyer, then PacifiCorp payments may also be adjusted by the PTC component.

Provisions for Delayed Commercial Operation: If seller fails to achieve December 31, 2001 completion date, seller shall pay buyer “delay lost revenue payments” and may eventually default on contract if delay continues.

Availability Guarantees and Warranty Provisions: Performance guarantee is that for each year, output will not fall below 60% of expected output; if output falls below this level, seller must pay PacifiCorp damages. Seller also guarantees that in any 2-year period, annual output will exceed 75% of expected output; otherwise seller must pay PacifiCorp damages. Seller shall maintain the Mitsubishi Warranty Agreement in due force for a minimum of 10 years, which requires payments to PacifiCorp for “lost energy output.” Seller’s failure to achieve performance guarantee for three consecutive years or for five of any six consecutive years will constitute default.

Treatment of Renewable Attributes: Renewable energy credits sold to PacifiCorp along with electricity.

Other Notes: After the seventh contract year, the seller or buyer may request an adjustment to the contract price sufficient to offset any tax changes that have occurred.

2.9 FPL Wisconsin Wind – Addison Wind Project

Project Size: 29.7 MW (project never came on line)

Project Location: Washington County, Wisconsin near Addison

Project Developer/Owner: FPL

Purchaser of Energy: Wisconsin Electric Power and Alliant-Wisconsin Power & Light

Contract Execution Date: September 16, 1999 for both buyers

Project On-Line Date: Expected operation date – no later than December 31, 2000

Projected Output and Capacity Factor: 60,504 MWh, 27.4% capacity factor

Turbine Manufacturer and Size: 33 900 kW turbines

Contract Price and Term: Wisconsin Electric: 10 year contract, with 5-year extension option for buyer and then another 5-10 year extension option. Contract price for power up to the contract energy amount = \$73.9/MWh in first year, rising to \$83.3/MWh in the 25th year. These prices assume that the PTC is *not* available. If seller fails to deliver the projected output in one year, the deficiency shall be added to the subsequent year's contract energy amount. If seller delivers more power than contract energy amount, the excess will be priced at the buyer's net generation cost. If the PTC *is* available, PTC benefit will be shared between the buyer and seller: buyer will obtain 47% of the PTC value in the first 5 years, and 90% in the latter 5 years; PTC value = PTC/(1 - federal tax rate). According to this formula, with the PTC the contract price begins at \$62.1/MWh in year 1, drops to \$48.2/MWh in year 10, rises to \$77.7/MWh in year 11, and rises to \$83.3/MWh in year 25. Alliant Energy: Ten-year contract. \$80.7/MWh in first year without the PTC, rising to \$84.4/MWh in the 10th year. Other terms similar to Wisconsin Electric, with the exception of the PTC sharing arrangement: buyer receives 47% of PTC value for first 5 years, and 50% of PTC value for remaining 5 years. According to this formula, contract price with PTC is slightly over \$68/MWh for the duration of the 10-year contract.

Provisions for Delayed Commercial Operation: If seller fails to achieve December 31, 2000 completion date, seller shall pay buyers liquidated damages and may eventually default on contract if delay continues.

Availability Guarantees and Warranty Provisions: None specified

Treatment of Renewable Attributes: Renewable energy credits sold to buyers along with electricity.

2.10 Mountainview

Project Size: 66.6 MW

Project Location: Riverside County, California

Project Developer/Owner: SeaWest/PG&E Energy Trading

Purchaser of Energy: California Department of Water Resources

Contract Execution Date: May 31, 2001

Project On-Line Date: Expected operation date – October 1, 2001

Projected Output and Capacity Factor: Unspecified

Turbine Manufacturer and Size: 111 Mitsubishi MWT-600 kW turbines

Contract Price and Term: \$58.50/MWh fixed nominal payment for 10-year contract term

Provisions for Delayed Commercial Operation: If seller fails to achieve October 2001 operation date, buyer may terminate contract.

Availability Guarantees and Warranty Provisions: None specified

Treatment of Renewable Attributes: Seller retains rights to renewable attributes and emissions credits.

2.11 Whitewater Hill

Project Size: 65.1 MW

Project Location: Riverside County, California

Project Developer/Owner: Whitewater Energy Corp.

Purchaser of Energy: California Department of Water Resources

Contract Execution Date: July 12, 2001, modified in 2002

Project On-Line Date: Expected operation date – before August 31, 2002

Projected Output and Capacity Factor: Unspecified

Turbine Manufacturer and Size: 41 Enron 1.5 MW turbines, and either 4 Enron 900 kW turbines or 4 Vestas V-47 turbines

Contract Price and Term: \$54/MWh fixed nominal payment for 11.5-year contract term if the project achieves commercial operation before August 31, 2002. \$40/MWh for contract term if project comes on line after this date.

Provisions for Delayed Commercial Operation: Contract price provides strong incentive for early construction. Any portion of project not operating by December 1, 2002 may be terminated by buyer.

Availability Guarantees and Warranty Provisions: Contract may be terminated if no energy is delivered for 6 months. Buyer may also terminate if seller fails to achieve average availability of 75% in a capacity demonstration test.

Treatment of Renewable Attributes: Seller retains rights to renewable attributes and emissions credits.

2.12 Cabazon

Project Size: 42.9 MW

Project Location: Riverside County, California

Project Developer/Owner: Whitewater Energy Corp.

Purchaser of Energy: California Department of Water Resources

Contract Execution Date: July 12, 2001, modified in 2002

Project On-Line Date: Expected operation date – before August 31, 2002

Projected Output and Capacity Factor: Unspecified

Turbine Manufacturer and Size: 65 Vestas V-47, 660 kW turbines

Contract Price and Term: \$54/MWh fixed nominal payment for 11.5-year contract term if the project achieves commercial operation before August 31, 2002. \$40/MWh for contract term if project comes on line after this date.

Provisions for Delayed Commercial Operation: Contract price provides strong incentive for early construction. Any portion of project not operating by December 1, 2002 may be terminated by buyer.

Availability Guarantees and Warranty Provisions: Contract may be terminated if no energy is delivered for 6 months. Buyer may also terminate if seller fails to achieve average availability of 75% in a capacity demonstration test.

Treatment of Renewable Attributes: Seller retains rights to renewable attributes and emissions credits.

2.13 Stateline

Project Size: 300 MW

Project Location: Umatilla County, Oregon and Walla Walla County, Washington

Project Developer/Owner: FPL Energy

Purchaser of Energy: PacifiCorp

Contract Execution Date: November 30, 2000

Project On-Line Date: Expected operation date – December 31, 2001

Projected Output and Capacity Factor: 886,600 MWh, 34% capacity factor

Turbine Manufacturer and Size: 450 Vestas V-47 660 kW turbines

Contract Price and Term: 25-year contract term. Purchaser has option of three different pricing structures. Option 1 has a fixed price of \$23.9/MWh, escalating with the CPI. Option 2 starts at \$21.67/MWh and escalates over time to \$36.41/MWh. Option 3 starts at \$19.7/MWh and escalates to \$51.97/MWh. The purchase price of all energy in excess of 110% of the mean project output shall be at a price of \$19.7/MWh in year one, escalating to \$33.1/MWh in year 25.

Provisions for Delayed Commercial Operation: If PTC is extended but commercial operation date is not met, liquidated damage payments are applied. If PTC is not extended, Seller must still complete project and the contract price shall not be renegotiated.

Availability Guarantees and Warranty Provisions: Project must meet specified mechanical availability guarantees, or else seller must pay buyer liquidated damages and potentially default on the contract. Seller also guarantees that 2-year average summer output will = $75\% * 38\% * \text{mean project output}$, that 2-year average winter output will = $75\% * 35\% * \text{mean project output}$, and that 2-year average output will = 75% of mean project output. If seller does not meet these guarantees, liquidated damages payment are required.

Treatment of Renewable Attributes: Renewable energy credits sold to buyer along with electricity.

Other Notes: If FPL elects to expand the project or build other projects in Umatilla or Walla Walla counties, PacifiCorp has first right to purchase power under similar terms as this initial agreement. PacifiCorp also has an option to an ownership interest in the facility.

3 WIND PLANT SALES AGREEMENTS: A SUMMARY

FERC filings also include two wind plant sales agreements, summarized below.

3.1 Zilkha and Entergy: Mill Run, Somerset, Top of Iowa

Purchase Price:

The agreement is structured between Zilkha and Entergy, where Zilkha represents Atlantic Renewable Energy Corporation's (AREC) interests (AREC is 50% co-owner of the PA projects, and partial owner of Top of Iowa through MREC).

	Purchase Price (\$)	Capacity (MW)	Price (\$/MW)
Top of Iowa	\$90,150,000	80.1	\$1,125,468
PA Projects	<u>\$29,700,000</u>	<u>24.0</u>	<u>\$1,237,500</u>
Total	\$119,850,000	104.1	\$1,151,297

Zilkha has an option to buy (for \$1) 10% of the 3 projects upon the 10th anniversary of the closing date of this agreement (was anticipated to be December 15, 2011), provided that the projects have operated at a weighted average availability of 92.5% over 10 years of commercial operation. Zilkha must exercise within 30 days of 12/15/2011. The value of Zilkha's 10% participation option shall be valued on an unleveraged basis reflecting an 11% discount rate. (Note: 11% is also the discount rate used to calculate any adjustment to the purchase price presented in terms of annual cash flows. One might presume this means that Entergy's weighted return expectation is 11%).

(Note that Entergy ultimately did purchase the Top of Iowa plant, but did not purchase the Pennsylvania plants reportedly out of concern for the strength of the Enron Wind turbine warrantees.)

Payment Schedule:

- 1st payment: \$2,000,000, payable upon completion of this agreement, filing notice of the sale with FERC, and Entergy's due diligence. Zilkha could cancel if it had not received the 1st payment by 10/30/01.
- 2nd payment: \$111,350,000, payable upon a number of milestones, including substantial completion of the projects, executed PPAs, Entergy board approval, FERC approval of sale, and transfer of title.
- 3rd payment: \$3,250,000, payable upon 6 months of verified commercial operation of the projects in accordance with the EPC agreements, O&M agreements, and availability and power curve warranties (i.e., actual performance must have met expectations contained in any of these warranties or agreements).
- Final payment: \$3,250,000, payable upon final project completion and confirmation that all payments have been made as specified in the PPAs.

Warranties:

- Top of Iowa: 2-year warranty with NEG Micon (with one 3-year extension at Northern Iowa Windpower - NIW's - discretion) against equipment defects, a warranty of 97% of the turbines' power curve in converting wind to electricity, and a guarantee of 97% mechanical availability.
- PA Projects: 2-year warranty with Enron Wind (with one 3-year extension at Mill Run's or Somerset's discretion) against equipment defects, a warranty of 97% of the turbines' power curve in converting wind to electricity, and a guarantee of 97% mechanical availability.

Project Management and Administration:

- Top of Iowa: In return for managing the project, Zilkha will be paid \$139,725 per year for each year the project generates at least 75% of projected project revenues. During the first 5 years, the project will be operated under the terms of the O&M agreement with NEG Micon (Zilkha will supervise).
- PA projects: In return for managing these projects, Zilkha/AREC will be paid \$85,000 per year for each year the projects generate at least 80% of projected project revenues. During the first 5 years, the project will be operated under the terms of the O&M agreement with Enron Wind Maintenance (Zilkha will supervise).

Other:

There's a reference to the Top of Iowa project paying to NEG Micon bonus payments for early commercial operation and/or availability incentive payments for 10 years.

3.2 Cielo and Shell: Llano Estacado

Purchase Price:

A letter of intent, based on a pro-forma cash flow model, indicates that the purchase price for the 80 MW project (80 x MHI MW-1000) was provisionally set at \$82,600,000, or \$1,032,500/MW. This letter of intent is not a legal document, so may not represent the actual sales price or terms for the project. The provisional price is based on a financial model prepared by Cielo as set forth in Attachment B (unfortunately, this attachment is very blurry, but it looks like it contains a lot of information and assumptions that would go into a pro forma).

The model assumes a real, unleveraged IRR of 9% achieved during the 20-year project life, which does not take into account any pre-completion project risks. Should Shell take on some of these risks, the IRR may be adjusted upwards (i.e., the price downwards). Therefore, in the final agreement (this is just a letter of intent) the purchase price of \$82,600,000 will be adjusted upwards or downwards as necessary to achieve a real, unleveraged project IRR of 9% for Shell (assumes 20-year project life, though the PPA is only 15 years). Padoma (Jan Paulen's new company) acted as Cielo's agent for the sale.

Warranties:

Cielo will negotiate with Mitsubishi on warranty payment provisions. The MHI warranty payments will start at a target annual penalty rate of approximately \$60/MWh, inclusive of amounts payable to the Seller (Cielo). The amount paid to Cielo shall equal the sum of the PPA price plus a component for the PTC (grossed up to its pre-tax equivalent). Once established in a penalty table, the penalties will escalate with GDPIPD (GDP implicit price deflator).

Cielo and MHI will share a bonus for actual output that exceeds 97.5% of gross projected output. Bonus payments will start at \$25/MWh and escalate with GDPIPD.